<u>REMARKS</u>

The Examiner is thanked for the performance of a thorough search.

STATUS OF CLAIMS

By this amendment, no claims have been cancelled and no claims have been amended. Claims 36 and 37 have been added. Hence, Claims 1-37 are pending in the application.

REJECTIONS/OBJECTIONS BASED ON PRIOR ART

The Office Action rejected Claims 1-5, 8-11, 14-17, 21-24, 27-30, and 33-35 under 35 U.S.C. 103(a) as being unpatentable over Nagamoto (U.S. Patent No. 6,334,126), and further in view of Lincke (U.S. Patent No. 6,397,259).

The Office Action alleged that Claims 17, 21-24, 27-30, and 33-35 contain similar limitations as the methods discussed in Claims 1-5, 8-11, and 14-16. Therefore, the Office Action rejected Claims 17, 21-24, 27-30, and 33-35 under the rationale for rejection of Claims 1-5, 8-11, and 14-16.

The Office Action also rejected Claims 6-7, 12-13, 18-20, 25-26, and 31-32 under 35 U.S.C. 103(a) as being unpatentable over Nagamoto and Lincke as discussed in the rejection of Claims 1-5, 8-11, 14-17, 21-24, 27-30, and 33-35, and further in view of Bayeh (U.S. Patent No. 6,012,098).

These rejections are respectfully traversed.

NAGAMOTO

All of the claims are rejected based on Nagamoto, taken in combination with other references. Nagamoto discloses a data output system and method where a database holds data in voice, image, and text formats. After a search request from a client is processed, the search result is converted in accordance with the ability, function and capacity of the client, and is sent back to the client terminal. (Nagamoto, Abstract).

LINCKE

All of the claims are rejected based on Lincke, taken in combination with Nagamoto. The Office Action states that "Nagamoto does not disclose said system generating, based on a first set of parameters, a request object", but that in the same field of endeavor, Lincke discloses transforming a first message into a standard data object which is transmitted to the source of data. Lincke discloses methods for "novel data compression techniques to enable wireless communications devices to complete transactions by exchanging a minimum number of data packets." In many circumstances, both the request and the response comprise a single packet. (Lincke, Abstract).

CLAIM 1

Among other things, Claim 1 requires:

...;
within said system generating, based on a first set of parameters, a request object;
wherein said first set of parameters includes identity of said service;
...;
at said system converting said responses into said particular format;
at said system generating, based on said responses, a composite response
    document in said particular format;

at said system transforming said composite response document into a client-
    formatted response based on a second set of parameters;
wherein said second set of parameters includes identity of said particular type of
    client; and

... .

As shall be explained hereafter, Claim 1 is not obvious in light of Nagamoto, when taken in combination with Lincke, because neither Nagamoto nor Lincke, taken alone or in combination, disclose or suggest the limitations recited above.

THE CLAIMS ARE NOT TO THE MERE CONCEPT OF CONVERTING DATA FORMATS BASED ON THE INTENDED RECIPIENT'S CAPABILITIES

As a preliminary matter, it should be noted that no attempt is being made to merely claim the idea of converting data from a format that cannot be used by the intended recipient of the data to a format that can be used by the intended recipient of the data. It is conceded that Nagamoto is a good example of a system that employs that general concept.

For example, in col. 10, lines 59-64 and with reference to FIG. 5, Nagamoto states that

> "[w]hen the search result is image data and the communication terminal to which the search result should be sent (the transmission destination) does not have an image display function, for example, the controller 23 extracts text data associated with that image data and sends that text data as the search result."

In other words, when the terminal cannot display an image, the image is converted to text. Further, in col. 10, line 65 to col. 11, line 3 and FIG. 5, Nagamoto states that

> "[w]hen the search result is text data whose amount exceeds the capacity of the communication terminal at the transmission destination, the text data generator 25 edits that text data in such a way that the amount of the text data falls within the capacity of the destination's communication terminal."

In other words, when the search result is a text too large to be displayed, the text is converted to a text of smaller size. Yet further, in col. 11, lines 3-8 and FIG. 5, Nagamoto states that

> "[w]hen the search result is text data and the communication terminal at the transmission destination has only a voice reproducing function, such as a telephone having no display device, the text-speech converter 26 converts the text data to voice data."

In other words, when the terminal cannot display text data, the text data is converted to voice. And yet further, in col. 11, lines 9-16 and FIG. 5, Nagamoto states that

> "[w]hen the search result is image data compressed by a predetermined system (e.g. JPEG or GIF) and only an image compression/decompression program of another system is installed in the communication terminal at the transmission destination, the compression form converter 27 decompresses the image data and compresses again the resultant image data by the system of the program installed in the destination's communication terminal."

In other words, when the image cannot be displayed by the terminal, the image is converted into an image of a format that can be recognized by the terminal.

In sum, Nagamoto teaches that, depending on the client terminal, the search results can be converted into at least the following formats: (1) text, (2) text of smaller size, (3) voice, and (4) image of different type.

"Converting said responses into said particular format"

The Office Action equates the conversions described in Nagamoto with the limitation "at said system converting said responses into said particular format" recited in Claim 1. However, for the reasons given hereafter, the convert-to-client-supported-format operation described in Nagamoto cannot possibly qualify as "at said system converting said responses into said particular format".

Specifically, Nagamoto's convert-to-client-supported-format operation puts the data in a format supported by the intended recipient. In contrast, the claimed step of "at said system converting said responses into said particular format" does not. The fact that the "particular format" is not a format dictated by the capabilities of the client is clearly evidenced by the fact that the composite response document recited in Claim 1, which is in the "particular format", must be transformed in order to produce a "client-formatted response". Such a transformation would be unnecessary if the "particular format" was a client-specific format.

In other words, the "particular format" recited in Claim 1 is clearly an intermediary format which is neither the native format of the responses received by the system (the responses are converted into the particular format), nor the client-specific format of the response documents produced by the system (the composite response documents must be transformed before being transmitted to the clients). Nagamoto does not disclose or in any way suggest converting responses into an intermediary format, and then converting from the intermediary format to a client-specific format.

"Generating a composite request document in said particular format"

Nagamoto does not describe generating a composite response document in the particular format based on the responses. The Office Action alleges that generating a "composite response document in said particular format" is described in Nagamoto, col. 10, line 30 to col. 11, line 35. However, Nagamoto does not teach or in any way suggest generating a composite response document. In col. 10, lines 53-58 and with reference to FIG. 5, Nagamoto explicitly states that

> "the controller 23 works with a text data generator 25, a text speech converter 26 and a compression form converter 27 as needed to perform a

16

predetermined process on data acquired from the database 1 as the search result, so that **the search result can be sent to the communication terminal** at the transmission destination." (emphasis added).

This paragraph, if anything, teaches that the search result is sent directly to the client terminal, and says nothing whatsoever about creating a composite response document based on the search result. Thus, the limitation of Claim 1 requiring the generation of "a composite response document in said particular format", is not described, or even suggested, by Nagamoto.

"Generating, based on first set of parameters, a request object"

As shall be explained hereafter, Claim 1 is not obvious in light of Nagamoto, when taken in combination with Lincke, because "generating, based on a first set of parameters, a request object; wherein said first set of parameters includes identity of said service" is not described in Lincke.

Claim 1 requires generating a request object based on a first set of parameters, wherein the first set of parameters include the identity of the requested service. These limitations are very different from the transformation of a message into a "standard object data request" as described in Lincke.

The Office Action asserts that Lincke describes generating a standard object data request in col. 5, lines 9-65. However, nothing in this cited paragraph suggests that any **parameters** are used **to generate** a "standard object data request". In fact, Lincke teaches **"transforming"** a first message into a standard object data request. In col. 5, lines 26-33, Lincke states that the method of transforming a first message into a standard object data request

"... comprises combining the first message received from client processing resources with a hypertext markup language hyperlink

document. The first message comprises field values and field indices corresponding to fields in the hypertext markup language hyperlink document."

Thus, what Lincke discloses is not **generating** a request object **based on a first set of parameters that include the identity of a requested service** as required by Caim 1, but rather the **transformation** of a first message into a standard HTML document, where the transformation is **predetermined** since the message apparently is pre-formatted to contain only fields and indices that can be represented in the HTML document. There are no parameters involved in the transformation, and thus the transformation always produces the same standard request object.

The notion that Lincke describes transforming a message into a standard object data request without any parameters (much less parameters that include the identity of a requested service) is further strengthened by the paragraph in col. 9, lines 59-65:

"the [method for requesting data objects from a data source] comprises submitting compressed representations of field values and field indices, transmitting a first message in packets of data from a client to a server, transforming the first message into a standard object data request, and transmitting the standard object data request to the source of data."

Here, once again, a first message is pre-formatted to contain values and indices, and the message is subsequently transformed into a standard object data request. Nothing at all suggests that there might be parameters involved in the transformation, or that a different transformation is possible depending on the parameters. Furthermore, since there are no parameters involved in the transformation described in Lincke, there is not even a possibility that the identity of the service might be a part of the parameters.

Thus, Lincke does not disclose "generating, based on a first set of parameters, a request object; wherein said first parameter includes identity of said service" as required by Claim 1.

With respect to the motivation to combine Lincke and Nagamoto, the Office

Action asserts that

> "[s]ince Lincke teaches a wireless communications system providing
> packet minimized communications between a wireless client and a proxy
> server, which is similar to a process of a communication terminal when a
> search requester requests a search for information in a database and the
> search result is returned to the search requesting communication terminal
> of Nagamoto, thus, it would have been obvious to one of ordinary skill in
> the art at the time the invention was made to combine the teachings of
> Lincke and Nagamoto to include generating a request object based on a set
> of parameters."

In other words, the Office Action asserts that the motivation to combine the teachings of

Lincke and Nagamoto arises out of the similarity between the two systems. However, it

is clear that Lincke and Nagamoto address two entirely different problems. Lincke, on

one hand, addresses the problem of minimizing communications to a wireless device by

providing methods for data compression. Nagamoto, on the other hand, addresses the

problem of servicing requests from a variety of client terminals with different functions

and capabilities by providing mechanisms for converting text, image, and voice data.

Thus, one with ordinary skill in the art would not be motivated to combine, with a

reasonable probability of success, transforming a message into a "standard object data

request" as described in Lincke with the method and system as described in Nagamoto.

As explained above, Nagamoto when taken in combination with Lincke, does not

disclose or in any way suggest the Claim 1 steps of converting the responses into a

particular format, generating a composite response document in the particular format

based on the responses, and generating a request object based on a first set of parameters

where the parameters include identity of the requested service. Therefore, it is respectfully submitted that Claim 1 is allowable over the art of record.

OTHER INDEPENDENT CLAIMS

CLAIM 22

Claim 22 is the "computer-readable medium" form of Claim 1. This claim has limitations that correspond to those discussed above, and is therefore allowable for the same reason as Claim 1.

CLAIM 17

Claim 17 is the "system" form of Claim 1. This claim has limitations that correspond to those discussed above, and is therefore allowable for the same reason as Claim 1.

Furthermore, Claim 17 is allowable since it includes separate elements defining the structure of the system which are not described in the cited references.

Claim 17 requires:

```
... ;
a request preprocessor, which is located separately from clients, ...;
said request processor operatively coupled to said request preprocessor and to one
        or more gateways, ...;
one or more gateways operatively coupled between said request processor and
        said data sources, ...;
said post processor operatively coupled to said request processor, ...;
... .
```

None of the cited references disclose, or even suggest, the use of a request preprocessor, request processor operatively coupled to the request preprocessor, one or more gateways operatively coupled between the request processor and the data sources, and post processor operatively coupled to the request processor. Therefore, it is respectfully submitted that Claim 17 is allowable over the art of record.

DEPENDENT CLAIMS

All of the dependent claims depend directly or indirectly on one of the independent claims discussed above. Because each of the dependant claims includes the limitations of the claim upon which it depends, the dependant claims are patentable for at least those reasons given above. In addition, the dependent claims introduce additional limitations that independently render them patentable. For example:

CLAIM 3 requires that "one of said requests invokes a search mechanism at a data source based on a first set of search criteria; and the step of filtering data includes data that originated from said data source based on a second set of search criteria". While Nagamoto does teach use of a "search range" and a "keyword" as a search criteria used in the request sent **to** a data source (col. 8, lines 5-9), Nagamoto does not teach or in any way suggest employing a second set of criteria to filter data that originated **from** the data source.

CLAIM 4 requires that "said first set of parameters for generating said request includes identity of said particular user." Nagamoto does not teach that the identity of the particular user makes any difference in how a search result is processed. In col. 8, lines 1-4, Nagamoto describes the use of a Terminal ID code to represent the ability of the communications terminal to present the search result, and the use of a program number to represent the functions that the communications terminal can carry out. However, the Terminal ID and the program number identify the client (depicted in FIG. 1 as PC 4,

21

PDA 5, mobile phone 6, or pager 7), and NOT the identity of the particular user of the client (depicted in FIG. 1 as the search requester 8).

CLAIM 21 is a "system" claim that has limitations similar to those in Claim 4, and is therefore allowable for the same reason as Claim 4.

CLAIM 23 is a "computer-readable medium" claim that has limitations similar to those in Claim 4, and is therefore allowable for the same reason as Claim 4.

CLAIM 8 requires

said one or more data sources include
    a first data source that supports a first protocol and is accessible
        through a first gateway, and
    a second data source that supports a second protocol and is
        accessible through a second gateway; and
the step of converting said responses into said particular format includes
    said first gateway converting a response from said first data source
        to said particular format; and
    said second gateway converting a response from said second data
        source to said particular format.

As pointed out in the Office Action, in col. 18, lines 25-67, Nagamoto discloses a request made to a Web server instead of a database. However, nothing in Nagamoto indicates or even suggests that two separate and structurally different data sources can be supported at the same time by the Nagamoto system. While Nagamoto discloses, **in separate embodiments**, the use of a database and a Web server as the data source, nothing indicates that a database and a Web Server can be used **in the same embodiment** of the Nagamoto system.

Furthermore, no two separate data sources, supported by two separate protocols and requiring conversion of responses according to two separate protocols, are disclosed

in Lincke either. The paragraphs cited by the Office Action from Lincke, namely col. 9,

lines 30-47 (describing a Web server as a data source), col. 11, lines 8-25 (describing the

function of a proxy connected to a single Web server), and col. 14, lines 48-64

(describing how CGI scripts operate), do not support the notion that Linke will suggest to

one with ordinary skill in the art that two or more separate and structurally different data

sources, supported by two separate protocols, can be used successfully in the system

described by Nagamoto.

CLAIM 27 is a "computer-readable medium" claim that has limitations similar to

those in Claim 8, and is therefore allowable for the same reason as Claim 8.

CLAIM 15 requires the method of Claim 1 wherein:

the method further comprises the steps of
 receiving data that indicates user-specific customizations to services;
 storing said data in a configuration database;
 searching said configuration database for said user-specific customizations
  in response to receiving said request for said service;
said first set of parameters used to generate said request object includes said user-
 specific customizations.

As pointed out in the discussion of Claim 4 above, nothing in Nagamoto and Lincke

suggests that the identity of the user is used in any way by the Nagamoto and Lincke

systems. The paragraphs from Nagamoto cited by the Office Action, namely col. 7, line

15 to col. 8, line 17 describe the capability and functions of the **client** (which, as defined

by the Nagamoto system in FIG. 1, can be a PC, PDA, mobile phone, or a pager), and **not**

the user (described in Nagamoto in FIG. 1 as the search requester 8) who is actually

using the communication terminal. In direct contrast, Claim 15 requires receiving data

that indicates **user-specific customizations** to services.

Further, Claim 15 requires storing the user-specific customizations in a configuration database. Nothing in Nagamoto even suggests that **user-specific customization** information is stored in a configuration database. The paragraph from Nagamoto cited by the Office Action, col. 5, lines 55-60 describes a **data source** holding data in various formats, such as image, text, and voice. As described, the data source is not a configuration database, but it is rather the source of the data to which a search request is made.

The Office Action further alleges that Nagamoto, in col. 6, lines 49-58, describes searching a configuration database for user-specific configurations. This is incorrect. The cited paragraph describes the operation of the Nagamoto system with reference to FIG. 1: a search requester informs the server of in what format should the search result be transferred, and in accordance with this request the server obtains a search result from the data source and formats it in the proper format. In contrast, Claim 15 requires a configuration database holding **user-specific** customizations **in addition** to the basic requirements of searching a data source and returning results to a user as described in Claim 1.

Finally, with respect to Claim 15, the Office Action alleges that Nagamoto, in col. 8, lines 5-10, describes using a first set of parameters, the parameters including user-specific customizations, to generate the request object. This is incorrect. The cited paragraph describe the use of a "search range" and a "keyword" to perform the search of the data source itself, which is quite different from using **user-specific** customizations to generate a request object as required by Claim 15.

CLAIM 34 is a "computer-readable medium" claim that has limitations similar to those in Claim 15, and is therefore allowable for the same reason as Claim 15.

CLAIM 16 requires

said one or more data sources include
a first web site accessible through a gateway, and
a second web site accessible through said gateway; and
the step of converting said responses into said particular format includes
said gateway converting a first response from said first web site to said
particular format; and
said gateway converting a second response from said second web site to
said particular format.

Similarly to Claim 8, Claim 16 describes a method where there are at least two data sources, the two data sources being two websites accessible through a gateway. However, as pointed out in the discussion about Claim 8 above, nothing in Lincke indicates that two websites can be used **in the same embodiment** as data sources. The paragraphs cited by the Office Action from Lincke, namely col. 9, lines 30-47 with reference to FIG. 1, describe only one Web server 140 as a data source, and a proxy server 180 providing the connection to a private wireless network 172. In contrast, Claim 16 requires two distinct websites as the data sources accessible through a gateway, where the gateway performs the conversion of the responses from the data sources.

CLAIM 35 is a "computer-readable medium" claim that has limitations similar to those in Claim 16, and is therefore allowable for the same reason as Claim 16.

CLAIM 6 requires the method of claim 1 wherein "the step of generating a composite response document in said particular format involves generating a composite

response document in XML." The Office Action rejected Claim 6 under 35 U.S.C. 103(a) as being unpatentable over Nagamoto and Lincke, and further in view of Bayeh.

Bayeh describes a technique and a method for using servlets to isolate the retrieval of data from the rendering of the data into a presentation format. The data servlet formats its output data stream for transfer to a downstream servlet. The data stream may be formatted using language such as XML. The rendering servlet parses this XML stream, and using a XSL style sheet, creates an HTML data stream as an output. (Bayeh, Abstract).

The Office Action correctly points out that "Nagamoto-Lincke do not disclose the step of converting said responses into the particular format involves converting responses into XML and the step of generating a composite response document in the particular format involves generating a composite response document in XML." The Office Action further asserts that Bayeh discloses a data servlet that formats query results from a database to an XML.

However, the Office Action incorrectly suggests that Bayeh describes generating a **document** in XML format. As pointed out in the discussion of Claim 1, Nagamoto and Lincke do not disclose generating a composite response document at all. Bayeh does not disclose generating a document in XML format either. In Bayeh, col. 8, lines 16-18 with reference to FIG. 4, it is stated that

> "[i]n the preferred embodiment of the present invention, the data Servlet formats its output as an Extensible Markup Language ("XML") **data stream**." (emphasis added)

Furthermore, in the Abstract Bayeh clearly suggests that a **data stream**, and **not a document**, is formatted into an XML format by stating that "[t]he rendering servlet parses this XML data stream". Yet further, in FIG. 4, **the arrow** pointing from the data

26

servlet 83 to the rendering servlet 85 is clearly and unmistakenly marked as "XML data stream." All this clearly shows that Bayeh does not disclose a document in an XML format, but rather a **data stream** in XML format used as a temporary **intermediate** output from the data servlet to the rendering servlet.

In contrast, Claim 6 requires that a composite response **document** be generated in an XML format. The composite response document in XML format, as required by Claim 6, is fundamentally different from the data stream in XML format, as described in Bayeh, because while the composite response document is fixed and is itself transformed into a client-formatted response, the data stream is a temproary intermediate which is used to create a separate response that is subsequently sent to the client.

CLAIM 25 is a "computer-readable medium" claim that has limitations similar to those in Claim 6, and is therefore allowable for the same reason as Claim 6.

CLAIM 12 requires the method of Claim 6 wherein

> the step of generating a request object involves generating an XML request
>   document that includes unresolved links; and
> the step of transmitting requests involves resolving said undersloved links.

The Office Action alleges that Nagamoto, in col. 19, lines 7-19 and col. 19, line 59 to col. 20, line 15, and further in view of Lincke and Bayeh, disclose generating a request document including unresolved links. This is incorrect. In col. 9, lines 13-15, Nagamoto describes that

> "[u]pon reception of the keyword to be searched from the [user], the
> controller searches the information providing table and sends a list of
> URLs corresponding to that keyword to the communication terminal."

27

This paragraph clearly shows that Nagamoto describes returning a list of URLs to the client terminal, and not, as required by Claim 12, generating a request object with unresolved links which links are to be resolved upon transmitting the responses to the client.

CLAIM 31 is a "computer-readable medium" claim that has limitations similar to those in Claim 12, and is therefore allowable for the same reason as Claim 12.

CLAIM 13 depends from Claim 12, and further requires that "the step of generating said composite response document involves replacing said unresolved links in said XML request document with XML data generated based on said responses from said one or more data sources." As discussed above with respect with Claim 12, Nagamoto-Lincke-Bayeh do not describe generating a request document with unresolved links and resolving the links when the responses are transmitted to the client, so therefore Nagamoto-Lincke-Bayeh cannot possibly describe replacing the unresolved links with data generated based on the responses from the data sources as required by Claim 13.

CLAIM 32 is a "computer-readable medium" claim that has limitations similar to those in Claim 13, and is therefore allowable for the same reason as Claim 13.

OTHER DEPENDENT CLAIMS

The dependent claims that are not specifically addressed above are independently allowable based on the patentable limitations that they introduce. However, in light of

the fundamental differences identified above, and to expedite the favorable resolution of

this case, a separate argument is not given for each of these dependent claims at this time.

CONCLUSION

For the reasons set forth above, all pending claims are patentable over the art of

record. Accordingly, allowance of all claims is hereby respectfully solicited.

The Examiner is respectfully requested to contact the undersigned by telephone if

it is believed that such contact would further the examination of the present application.

No extension fee is believed to be due. However, to the extent necessary,

Applicants petition for an extension of time under 37 C.F.R. § 1.136. The Commissioner

is authorized to charge any fee that may be due in relation to this application to our

Deposit Account No. 50-1302.

Respectfully submitted,

HICKMAN PALERMO TRUONG & BECKER LLP

Dated: August 19, 2003
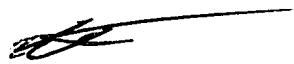
Brian D. Hickman, Reg. No. 35,894

1600 Willow Street
San Jose, California 95125-5106
Telephone No.: (408) 414-1201
Facsimile No.: (408) 414-1076

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Box 1450, Alexandria, VA 22313-1450

on August 19, 2003   by _____
   (Date)   (Signature)